**Emergency Manager Weather Information Network**
**Configuration Management Terms of Reference**

## A. Purpose

These Terms of Reference (TOR) define the National Weather Service's (NWS) organizational authority, roles, and procedures for the management of data products transmitted via the Emergency Manager Weather Information Network (EMWIN) under Change Management (CM) control. This TOR will not cover the EMWIN software applications, hardware components, or any third party software packages.

## B. Authority

The NWS Configuration Management Board (CMB) has established the formation of the Data Review Group (DRG). The DRG provides orderly, thorough review and processing of requests for change (RC) to data products communicated over the NWS communication networks. All RCs relating to data products shall be made in accordance with this TOR and with existing NWS CM processes defined in WSOM Chapter A-21.



## C. Responsibilities

The EMWIN system is responsible for transmitting selected raw weather data to interested parties in the public and private sectors as a continuous datastream. The DRG is responsible for managing the process flow of data products from the NWS Telecommunication Gateway (NWSTG) to Wallops Island. The DRG is authorized to adjudicate RCs submitted to the DRG Chairperson. The DRG Chairperson coordinates a formal review and decision of RCs with members of the DRG Board. The Board is composed of at least one member from the Office of Hydrology, the Office of Meteorology, the Office of Climate, Water, and Weather Services (OS), the Office of Systems Development (OSD), the National Center for Envirronment Prediction (NCEP), National Environmental Satellite, Data, and Information Service (NESDIS), and the Network Control Facility (NCF). [The reorganization may affect certain members of the DRG board.] Any unresolved issues shall be forward to the NWS System Change Manager (SCM) for resolution in accordance with NWS policy.

## D. EMWIN Operational Description

The EMWIN system was designed to provide selected raw data to interested parties in the public and private sector. This raw data is received from the NWS gateway system, NOAA Weather Wire System (NWWS), and government provided weather data on the internet.. The current users of the EMWIN data include NWS WFOs, state and local governments (Emergency Managers), TV stations, businesses, and the general public.

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The main purpose of the EMWIN system is to provide timely warnings of approaching severe weather for emergency managers. The system is also used by NWS sites to verify that the primary operational systems (AWIPS, NEXRAD, etc) are getting their data into the various networks.

The data is sent to three distribution points. The primary distribution point is via a dedicated phone line to an uplink computer on Wallops Island, Virginia. The EMWIN data is transmitted to Wallops Island at 9600 Baud. The uplink is to the Goes 8 and 10 satellites (identified as GOES East and West). The data on the satellites is then made available to anyone with a downlink capability and a microcomputer with the appropriate vendor supplied software. There are some sites down-linking the data and then re-distributing the data to other sites via commercial phone lines. This allows users who don't have satellite downlink capability, but do have a microcomputer and the appropriate software, to receive the EMWIN data.

The data is also sent to a WEB server giving anyone with internet access an opportunity to view EMWIN data. A software package identified as Byte Blaster is needed to access the EMWIN data on the internet. This software is free ware and is readily available on the WEB.



Finally, selected text, graphics, and imagery products are transmitted as an audio signal on a dedicated VHF or UHF radio frequency. This information can be received by anyone within the 40-50 mile broadcast area, using an inexpensive radio receiver, a demodulator, and a personal computer. EMWIN software on the users PC, running under Windows, receives the signal through a serial port, stores the received weather products onto disk, and simultaneously allows you to display this information.

The EMWIN system contains many categories of weather data products with over 6,500 unique products. The current EMWIN data stream consists of the following types of products; analyses (environment/air pollution, hydrological/marine, surface, misc), climatic products (daily surface, monthly surface, misc), forecasts (aerodrome, aviation area, extended, flash flood guidance, headwater guidance, hydrological, iceberg, local/area, misc), graphics (AFOS charts and map overlays), images (GOES satellite), Misc (civil emergency messages, public weather statements), reports (radar, seismic, synoptic, hydrological river, drifting buoy, ice), severe weather (watches, warnings, summaries, statements, advisories) and warnings (tsunami/tide, tornado, river flood, lakeshore/marine, typhoon/hurricane, marine/coastal flood, severe thunderstorm).

The EMWIN system breaks down these data into three primary categories. Warnings are given the highest priority, priority one. Warnings are transmitted before all other data. Text data are given a priority of two and are transmitted before graphic products. Graphics products require the most bandwidth and are given a priority of three. If the EMWIN system receives warning messages while text and graphics products are being transmitted, then transmission of text and graphics products are ceased until the warning messages are transmitted.

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The EMWIN system transmits a continuous stream of data. If no new information is available then old data is retransmitted. If the line does not have a continuous stream of data then the user systems think that the line is down and special alarms are activated. The EMWIN operates twenty four hours per day, three hundred sixty five days per year.